

HOW FAST DO WE SPEAK AND READ?

An account of a study made by
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of Psychology, and Eunice M. Russell, '32,
a major student in Psychology, Mt.
Holyoke College.

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THE ability to do intellectual work with accuracy and pleasurable smoothness depends greatly upon one's speed in oral and silent reading. Recognizing that certain fundamental processes involved in oral and silent reading are closely linked up with speech reactions generally, it has been our custom in Mount Holyoke College to include tests in rate of reading and in rate of speaking as a part of the required speech tests given to all new students each year. These tests are given through the co-operation of the departments of Psychology and Speech.

It has been stated that people talk at the rate of from 120 to 150 words per minute in ordinary conversation, and we were curious to find out if these figures held for a college group, and to know just what the rate would be in other outside groups when compared with college girls. We found, for instance, that a group of 87 children in Massachusetts schools talked at the rate of from 74 to 100 words per minute, on an average. A group of girls from the Barrington School, a nearby finishing school, averaged about 114 words per minute. We found the average rate for Mount Holyoke girls to be 137 words per minute, when talking to an instructor, approximating the range of 120 to 150 words per minute assumed for ordinary speech.

The rate of speaking in connection with broadcasting is also interesting. Though the radio listener may not be conscious of the rate of speech through the microphone, whether a person talks

very rapidly or rather more deliberately sometimes makes considerable practical difference in the effect. For this reason we have been "listening-in" to compare the rates of speech used by well-known public speakers.

We find that it is customary in broadcasting to speak somewhat more slowly to an invisible than to a visible audience. John Barrymore's rate in broadcasting from *Hamlet*, for instance, averaged 108 words per minute. Calvin Coolidge in a presidential address varied from 98 to 108 words per minute. President Mary E. Woolley in her opening address from the International Disarmament Conference in Geneva spoke at the rate of 120 words during the first minute, and at the rate of 98 words during her closing remarks, averaging 109 words per minute.

Lady Astor, speaking over the microphone at the Republican Rally in New York (1928) averaged 139 words per minute. Her range, during the five samplings of her speech, taken at regular intervals, was from 120 to 152 words per minute.

C. F. Jenkins, inventor of the radio-vision and radio-movies, averaged 140 words per minute during a short address. A sampling of the speech of J. Krishnamurti, Indian philosopher and poet, gave an average of 131 words per minute ranging from 123 to 140 words per minute, during his radio talk. King George addressing the London Naval Conference, spoke at about the same rate at each sampling of his speech, his average being 93 words per minute.

Prime Minister MacDonald in opening the London Conference (1930), averaged 119 words per minute, ranging from 108 to 127 words per minute in four samplings of his speech. The rate of Miss Jane Addams, speaking from Chicago, January 1930, during Collier's hour, was rather more rapid than any of these, averaging 184 words per minute, and ranging from 173 to 198 words per minute. For most speakers this rate would be rather rapid, judged from the standpoint of holding one's audience.

Alfred E. Smith, during his presidential campaign of 1928, averaged 130.5 words per minute, ranging from 122 to 138 words per minute in samples of his speech taken at regular intervals. Charles E. Hughes in his speech of November 5, 1928, averaged 135 words per minute, with a range from 133 to 138 words per minute, showing a remarkable uniformity in rate throughout.

The range for this entire group of speakers varied from 98 to 198 words per minute. The average for all these speakers was 135 words per minute. It is interesting to note that this was exactly the rate of Chief Justice Hughes.

Although one must acknowledge that there is some justice in the remark "It isn't that I speak too fast, but that you listen too slowly,"—nevertheless it is a well-known fact that speech which is habitually clear and deliberate is most enjoyed by the vast majority of listeners. Judging from the rate of utterance of these speakers, it seems that in addressing an invisible audience they have found it most advantageous to speak at a rate of 100 to 135 words per minute, most of them, and that such a rate is more acceptable to the radio audience than one which is either exceedingly deliberate or much accelerated.

Not only is rate of spontaneous speech significant, but it has been found that

there is a definite relationship between the rate in silent reading and in scholarship in college work.

In a study of the rates in oral and silent reading for Mount Holyoke freshmen, the department of Psychology has found some rather interesting facts, which have been compared with the results of other investigators. Headley in his studies of reading rate estimated that a student ought to be able to read 225 words per minute, or 40 to 50 pages per hour of ordinary material. But this is much faster than the average student can cover assignments on which quizzes and reports are based. Some members of our faculty assume that the average student will cover only 20 pages per hour, or about 100 pages per week in a standard textbook, though the rate is expected to vary with the reader, some girls covering in four hours what it takes another girl six hours to cover.

Headley's rate is more appropriate to assignments requiring "skimming" or rapid perusal of material. In courses requiring a good deal of supplementary reading, as in history, economics, religion, and literature, Headley's rate might be expected, while not at all suitable for courses emphasizing textbook work, extensive note-taking, and laboratory assignments. There is general agreement that rapid reading and comprehension are always an asset, and that slow, laborious reading is a handicap. Some students in each entering class have been found to surpass the average for seniors, while others are not up to the eighth grade standard. There are wide individual variations.

But reading difficulty is not restricted to the poorer students. Several departments report that during intensive work with honor students they have found a number of girls taken from the upper section of the student body in scholar-

ship who have had serious difficulty in reading rate and comprehension.

When a group of sophomores was retested, to compare their silent reading rate with that in the freshman year, it was found that some could read five times as fast as others—that is, 106 words per minute as compared with 512 words per minute. Some of these girls had doubled their speed since freshman year, but the average for the entire group was still below that for their class when tested as freshmen. Some girls were still reading too slowly in sophomore year to do the most effective work.

When a group of juniors was retested, they were found to equal the freshman average of their class as a whole, but even so, the rate in this slow-reading group was not as rapid as it should have been by the junior year.

Believing that poor reading might be an important factor in poor scholarship it was decided to carry on an experiment in the improvement of reading during the year 1928-29 and the task was assigned to Mary Ellen Hayes, then an Honor student. Miss Hayes worked with a group of local school children and with a group at the Springfield Child Guidance Clinic, as well as with a small group of Mount Holyoke College students referred to her by various departments.

Miss Hayes found that practically all the college students in her special group were desirous of improving their rate and comprehension in reading. Some stated that re-reading was always necessary in order to comprehend material covered; others found difficulty in condensing and taking notes; most of them were not at all confident about picking out important points in assignments; concentration was found to be difficult; distraction was frequent even in the quiet of the college library. Covering

the assignments in courses requiring a great deal of supplementary reading was most frequently mentioned, as these girls stated that they did not know how to "skim" such assignments.

Eye-movements were not extensively studied, but it was found that in number of fixations and regressive (backward) movements of the eyes in reading, the two girls having poorest scholarship were quite inferior to the rest of the group.

METHODS

The special group in remedial reading met for a class period once a week during most of the year. Special reading tests were prepared covering the material used in discussions of topics such as the following:

- The relation between rate and comprehension in reading.
- Skimming and its use in reading.
- Concentration and attention.
- How to get important points in reading.
- How to improve one's vocabulary.
- True-false tests.
- Graphing one's own improvement in reading.
- Budgeting one's time.
- Environmental conditions favorable for study.
- Attitude towards work.
- Purpose in reading.

SUMMARY

None of the students referred for remedial work were rapid readers.

A positive correlation was found between academic records, reading efficiency, and scholastic attainment.

Every student felt that she had benefited from the training in reading.

The average improvement shown, as judged by the Whipple Form A, Reading Test for High School and College Stu-

dents, which was given to all students in the special reading group, was 46 per cent in rate alone and 18 per cent in rate and comprehension combined.

ORAL READING

The median rate for Mount Holyoke freshmen in oral reading for the past seven years has been 180 words per minute, with a range from 58 to 393 words per minute. Some girls have read 6.7 times as fast as others, under apparently identical conditions.

SILENT READING

In silent reading the freshman rate during the same seven year period has averaged 310 words per minute, ranging from 82 to 609 words per minute. Some girls read 7.4 times as fast as others. When several members of the faculty were tested at different times on the same silent reading tests, we found that none of them read less than 600 words per minute. If faculty assignments are based upon the rate at which teachers read, one would naturally expect that more reading is assigned than can be covered in the allotted time for such courses.

CONCLUSION

The rate obtained for freshmen for the past seven years has been very much

the same for the entire period. That is, the speed does not seem to have increased, even with the present emphasis in educational circles on oral and silent reading for rate and comprehension. This indicates that the preparatory schools are not succeeding in equipping their students with greater ability along this line than heretofore.

Some of the conditions found among college students closely resemble the word-blindness found among elementary school children, except that the handicap is less severe in the case of the college student. We find many students who are careless in silent reading and poor in comprehension, with consequent low reading efficiency.

Then there are oral readers who are careless in silent reading and who need to develop a factual and experiential background for reading. They need to check themselves up frequently both in concentration and in comprehension. Those who are slow in rate should attempt to establish regular movements of the eyes in reading, develop rapid recognition of words, and increase the eye-voice span by direct effort. Attention must constantly be directed to content, and the ability to skim material is essential for rapid reading under the time limits imposed by college requirements.

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